

U.S.S.N.: 09/500,904
Filed: February 9, 2000
AMENDMENT

APPENDIX: Claims on Appeal

Claims 1-5 (cancelled)

6. (previously amended) A diagnostic test to predict the risk of developing lupus comprising

reagents which can be used to detect levels of antibodies to Epstein-Barr virus, indicators of Epstein-Barr infection of cells, or levels of Epstein-Barr DNA or protein in a patient, wherein the reagents used to detect antibodies to peptides from Epstein-Barr virus are peptides of up to forty amino acids in length comprising an amino acid sequence selected from the group consisting of PPPGRRP (SEQ ID NO:1), GRGRGRGG (SEQ ID NO:2), RGRGREK (SEQ ID NO:3), GAGAGAGAGAGAGAGAGAGAGAGA (SEQ ID NO:7), GPQRRGGDNHGRGRGRGRGRGGGRPG (SEQ ID NO:98), GGSGSGPRHRDGVRRPQKRP (SEQ ID NO:25), RPQKRPS (SEQ ID NO:26), QKRPSIGCKGTHGGTG (SEQ ID NO:27), GTGAGAGARGRG (SEQ ID NO:99), SGGRGRGG (SEQ ID NO:100), RGGSGGRRGRGR (SEQ ID NO:101), RARGRGRGRGEKRPRS (SEQ ID NO:102), SSSSGSPRRPPPGR (SEQ ID NO:103), RPPPGRPPFFHPVGEADYFEYHQEG (SEQ ID NO:104), PDVPPGAI (SEQ ID NO:33), PGAIEQGA (SEQ ID NO:34), GPSTGPRG (SEQ ID NO:105), GQGDGGRRK (SEQ ID NO:37), DGGRRKKGGWFGKHR (SEQ ID NO:38), GKHRGQGGSN (SEQ ID NO:106), GQGGSNPK (SEQ ID NO:107), NPKFENIA (SEQ ID NO:108), RSHVERTT (SEQ ID NO:109), VFVYGGSKT (SEQ ID NO:110), GSKTSLYNL (SEQ ID NO:111), GMAPGPGP (SEQ ID NO:46), PQGPLRE (SEQ ID NO:47), CNIRVTVC (SEQ ID NO:48), RVTVC SFDDG (SEQ ID NO:49), PPWFPPMVEG (SEQ ID NO:50) or the peptide consisting of GPQRRGGDNHGRGRGRGRGRGGGRPG (SEQ ID NO:98), or antibodies reactive with these peptides, and

U.S.S.N.: 09/500,904
Filed: February 9, 2000
AMENDMENT

control samples from individuals not at risk of developing lupus, and means for determining the differences in levels of antibodies to Epstein-Barr virus, indicators of Epstein-Barr infection of cells, or levels of Epstein-Barr DNA or protein in of a patient and control samples to distinguish individuals at higher risk of developing lupus from those at lower risk of developing lupus.

7. (previously amended) The diagnostic test of claim 6 wherein the reagents are used in assays selected from the group of assays based upon the relative presence of an antibody, assays based on cellular proliferation, assays based on molecular binding, assays based on cytokine production, assays based on skin reaction, and assays based on cell surface antigen.

8. (previously amended) The diagnostic test of claim 6 wherein the reagents used to detect antibodies to peptides from Epstein-Barr virus are selected from the group consisting of PPPGRRP (SEQ ID NO:1), GRGRGRGG (SEQ ID NO:2), RGRGREK (SEQ ID NO:3), GAGAGAGAGAGAGAGAGAGAGAGA (SEQ ID NO:7), GPQRRGGDNHGRGRGRGRGRGGGRPG (SEQ ID NO:98), GGSGSGPRHRDGVRRPQKRP (SEQ ID NO:25), RPQKRPSC (SEQ ID NO:26), QKRPSCIGCKGTHGGTG (SEQ ID NO:27), GTGAGAGARGRG (SEQ ID NO:99), SGGRGRRG (SEQ ID NO:100), RGGSGGRRGRGR (SEQ ID NO:101), RARGRGRRGEKRP (SEQ ID NO:102), SSSSGSPRRPPPGR (SEQ ID NO:103), RPPPGRKPFHPVGEADYFEYHQEG (SEQ ID NO:104), PDVPPGAI (SEQ ID NO:33), PGAIEQGPA (SEQ ID NO:34), GPSTGPRG (SEQ ID NO:105), GQGDGGRRK (SEQ ID NO:37), DGGRRKKGWFGKHR (SEQ ID NO:38), GKHRGQCGSN (SEQ ID NO:106), GQGGSNPK (SEQ ID NO:107), NPKFENIA (SEQ ID NO:108), RSHVERTT (SEQ ID NO:109), VFVYGGSKT (SEQ ID NO:110), GSKTSLYNL (SEQ ID NO:111), GMAPGPGP

U.S.S.N.: 09/500,904
Filed: February 9, 2000
AMENDMENT

(SEQ ID NO:46), PQGPLRE (SEQ ID NO:47), CNIRVTVC (SEQ ID NO:48),
RVTVCSFDDG (SEQ ID NO:49), and PPWFPPMVEG (SEQ ID NO:50).

9. (original) The diagnostic test of claim 8 comprising reagents for detection of
antibodies to GAGAGAGAGAGAGAGAGAGAGAGA (SEQ ID NO:7).

10. (original) The diagnostic test of claim 6 for testing patients identified with or at risk
of developing systemic lupus erythematosus comprising control samples from individuals with
systemic lupus erythematosus.

Claims 11-18 (cancelled)

19. (previously amended) A method for determining the likelihood that an individual
has lupus induced by Epstein-Barr virus, or is at risk for developing lupus, comprising
obtaining a sample from the individual to be tested,
mixing the sample with reagents which can be used to detect levels of antibodies to
Epstein-Barr virus, indicators of Epstein-Barr infection of cells, or levels of Epstein-Barr DNA
or protein in a patient,
analyzing the sample, and
comparing the analysis of the sample with results obtained with control samples from
individuals not at risk of developing lupus to determine if the differences in levels of antibodies
to Epstein-Barr virus, indicators of Epstein-Barr infection of cells, or levels of Epstein-Barr
DNA or protein in the individual and control samples indicates the individual is at a higher risk
of developing lupus than controls who are at lower risk of developing lupus.

20. (previously amended) The method of claim 19 wherein the reagents are used in
assays selected from the group of assays based upon the relative presence of an antibody, assays

U.S.S.N.: 09/500,904
Filed: February 9, 2000
AMENDMENT

based on cellular proliferation, assays based on molecular binding, assays based on cytokine production, assays based on skin reaction, and assays based on cell surface antigen.

21. (previously amended) The method of claim 19 wherein the reagents used to detect antibodies to peptides from Epstein-Barr virus are selected from the group consisting of PPPGRRP (SEQ ID NO:1), GRGRGRGG (SEQ ID NO:2), RGRGREK (SEQ ID NO:3), GAGAGAGAGAGAGAGAGAGAGA (SEQ ID NO:7), GPQRRGGDNHGRGRGRGRGRGGGRPG (SEQ ID NO:98), GGSGSGPRHRDGVRRPQKRP (SEQ ID NO:25), RPQKRPS (SEQ ID NO:26), QKRPSIGCKGTHGGTG (SEQ ID NO:27), GTGAGAGARGRG (SEQ ID NO:99), SGGRGRGG (SEQ ID NO:100), RGGSGRRRGRGR (SEQ ID NO:101), RARGRGRGRGEKRPRS (SEQ ID NO:102), SSSSGSPRRPPPGR (SEQ ID NO:103), RPPPGRPPFFHPVGEADYFEYHQEG (SEQ ID NO:104), PDVPPGAI (SEQ ID NO:33), PGAIEQGPA (SEQ ID NO:34), GPSTGPRG (SEQ ID NO:105), GQGDGGRRK (SEQ ID NO:37), DGRRKKGGWFGKHR (SEQ ID NO:38), GKHRGQGGSN (SEQ ID NO:106), GQGGSNPK (SEQ ID NO:107), NPKFENIA (SEQ ID NO:108), RSHVERTT (SEQ ID NO:109), VFVYGGSKT (SEQ ID NO:110), GSKTSLYNL (SEQ ID NO:111), GMAPGP GP (SEQ ID NO:46), PQGPLRE (SEQ ID NO:47), CNIRVTVC (SEQ ID NO:48), RVTVCSDDG (SEQ ID NO:49), and PPWFPPMVEG (SEQ ID NO:50).

22. (original) The method of claim 19 wherein the individual is tested for the presence of antibodies to GAGAGAGAGAGAGAGAGAGAGAGA (SEQ ID NO:7).

Claims 23-26 (cancelled).

TABLE OF CONTENTS

- (1) REAL PARTY IN INTEREST**
- (2) RELATED APPEALS AND INTERFERENCES**
- (3) STATUS OF CLAIMS ON APPEAL**
- (4) STATUS OF AMENDMENTS**
- (5) SUMMARY OF THE INVENTION**
- (6) ISSUES ON APPEAL**
- (7) GROUPING OF CLAIMS**
- (8) ARGUMENTS**
 - (a) The Invention**
 - (b) Rejections Under 35 U.S.C. § 112, First Paragraph, Enablement**
 - (c) Rejections Under 35 U.S.C. § 103**
- (9) SUMMARY AND CONCLUSION**

Appendix: Claims On Appeal

Table of Contents

ATL1 #538648 v1

ATL1 #559027v1

OMRF 161 C/P
078617/00140